DOUGLAS KINZEY
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RESEARCH INTERESTS:

Modeling ecological systems; fisheries biology; marine food web dynamics; population and community ecology; statistical parameter estimation and inference.

PROFESSIONAL SUMMARY:

Current research involves developing an age-based assessment model for the ecological dynamics of Antarctic krill based on hydroacoustic and net-tow data from shipboard research surveys that incorporates spatial aspects of population structure with movement among small-scale management units. This model will include predation and fishing using sampling data from Antarctic predator populations and commercial fisheries in estimating the parameters of interest.

Past work compared parameter estimates from single-species assessment models with estimates from multispecies assessment models for fished species that also interact as predators and prey. Single species models combine the effects of all predators on a prey species into a single estimate for "natural mortality;" multispecies models represent predator-prey interactions in more detail. The data were from commercial fisheries, research surveys, and stomach samples for three species of fish on the Aleutian Shelf, Alaska.

20 years of experience in the field and on ships at sea as a marine mammal biologist, fishery biologist, and protected species observer for federal, university, private, and non-profit organizations.

EDUCATION:

B.S., Oregon State University (Zoology).

M.S., University of Massachusetts (Marine Fisheries Biology). Thesis title: *The Distribution of Abundance Among Species of Fish and its Implications for Habitat Quality in a New England Estuary*.

Ph.D., University of Washington (Aquatic and Fishery Sciences). Thesis title: *Multispecies Stock Assessment with Predator-Prey Interactions.*

TECHNICAL SKILLS:

Statistical modeling, inference, and visual display using AD Model Builder and R programming.

Application of theory and practice underlying age-structured models, stock assessment, food web modeling, line-transect sampling and related mathematical representations of dynamic ecological systems to provide scientific advice regarding living resources.

TECHNICAL SKILLS (CONTINUED):

Experimental design and field implementation of shipboard research surveys, fisheries observer sampling, ecological database management and manipulation.

SELECTED PUBLICATIONS AND TECHNICAL REPORTS:

Kinzey, D. and A.E. Punt. 2009. *Multispecies and single-species models of fish population dynamics: comparing parameter estimates.* Natural Resource Modeling 22(1):67-104

Aydin, K., S. Gaichas, I. Ortiz, D. Kinzey, and N. Friday. 2007. *A Comparison of the Bering Sea, Gulf of Alaska, and Aleutian Islands Large Marine Ecosystems Through Food Web Modeling.* NOAA Technical Memorandum NMFS-AFSC-178. 298 pp

Punt, A.E. and D. Kinzey. 2007. *Including Trophic Interactions in Fish Stock Assessments in the Aleutian Islands.* Final Report to North Pacific Universities Marine Mammal Research Consortium. 117 pp.

Kinzey, D., and T. Gerrodette. 2003. *Distance measurements using binoculars from ships at sea: accuracy, precision and effects of refraction.* Journal of Cetacean Research and Management 5(2):159-171.

Kinzey, D., T. Gerrodette, and D. Fink. 2002. *Accuracy and precision of perpendicular distance measurements in shipboard line-transect sighting surveys.* Southwest Fisheries Science Center, Administrative Report LJ-02-09:1-30.

Kinzey, D., and T. Gerrodette. 2001. *Conversion factors for binocular reticles.* Marine Mammal Science 17:353-361.

Kinzey, D., T. Gerrodette, A. Dizon, W. Perryman, P. Olson, and S. Rankin. 2001. *Marine mammal data collected during a survey in the eastern tropical Pacific Ocean aboard the NOAA Ships McArthur and David Starr Jordan, July 28-December 9, 2000*. NOAA Technical Memorandum, National Marine Fisheries Service, Southwest Fisheries Science Center 303:1-100.

Kinzey, D., T. Gerrodette, J. Barlow, A. Dizon, W. Perryman, and P. Olson. 2000a. *Marine mammal data collected during a survey in the eastern tropical Pacific Ocean aboard the NOAA Ships McArthur and David Starr Jordan, July 28-December 9, 1999.* NOAA Technical Memorandum, National Marine Fisheries Service, Southwest Fisheries Science Center 293:1-89.

Kinzey, D., P. Olson, and T. Gerrodette. 2000b. *Marine mammal data collection procedures on research ship line-transect surveys by the Southwest Fisheries Science Center.* Southwest Fisheries Science Center, Administrative Report LJ-00-08:1-32.

Kinzey, D., T. Gerrodette, J. Barlow, A. Dizon, W. Perryman, P. Olson, and A. Von Saunder. 1999. *Marine mammal data collected during a survey in the eastern tropical Pacific Ocean aboard the NOAA Ships McArthur and David Starr Jordan and the UNOLS Ship Endeavor July 31 - December 9, 1998.* NOAA Technical Memorandum, National Marine Fisheries Service, Southwest Fisheries Science Center 283:1-113.

Gerrodette, T., P. Olson, D. Kinzey, A. Anganuzzi, P. C. Fiedler and R. Holland. 1998. *Report of the survey design meeting for estimating abundance of eastern tropical Pacific dolphins, 1998-2000, December 17-18, 1997*. Southwest Fisheries Science Center Administrative Report LJ-98-03. 25pp.